Amendments to the Claims

Claim 1 (Currently amended): An electrolytic capacitor comprising:

a tantalum case;

a tantalum anode;

a dielectric layer on the anode;

an electrolyte in contact with the dielectric layer on the anode;

a layer of tantalum carbide on an inner surface of the case;

a layer of activated carbon between the layer of tantalum carbide and the electrolyte;

an insulating header in an open end of the case and electrically isolating the anode and the case;

a riser extending through the header and attached to a first lead;

a non-conductive gasket inside the case between the electrolyte and the header, the non-conductive gasket surrounding a portion of the anode not in contact with the electrolyte; and

a second lead of opposite polarity from the first lead, the second lead being attached to the case.

Claim 2 (Original): The capacitor of claim 1 wherein the electrolyte is a liquid electrolyte.

Claim 3 (Original): The capacitor of claim 1 wherein the electrolyte is a gel electrolyte.

Claim 4 (Currently amended): The capacitor of claim 1 wherein the gasket has a elastomer seal on the periphery of the gasket.

Claim 5 (Original): A capacitor comprising:

an anode;

a dielectric layer on the anode;

an electrolyte adjacent to the dielectric layer;

a metal case surrounding the anode;

an interface carbide layer on an inner surface of the case formed by heating graphite in contact with the case to an elevated temperature in the substantial absence of oxygen; and

a layer of activated carbon on the side of the interface layer away from the case, the activated carbon being in contact with the electrolyte.

Claim 6 (Original): The capacitor of claim 5 wherein the electrolyte is a liquid electrolyte.

Claim 7 (Original): The capacitor of claim 5 wherein the electrolyte is a gel electrolyte.

Claim 8 (Original): The capacitor of claim 5 wherein the elevated temperature is in the range of from about 1,000 °C to about 1,500 °C.

Claim 9 (Original): The capacitor of claim 5 further comprising a cup-shaped cylindrical case having two ends, and an open end being closed by a header with the anode projecting through the header.